Quizz 2 - OOP

Full name

Q1 - Describe this code line-by-line.

```ruby
first_name = ["Pierre", "Paul", "Jacques"].sample
last_name = "Paillard"
puts "Great! #{first_name} #{last_name} is born"
```

1.
2.
3.

Q2 - What's `initialize`? When is it called and what's its purpose?

Q3 - Consider this code. What's the difference between `string` and `String`?

```ruby
string = String.new("Hello World")
```

Q4 - What does this method do?

```ruby
def mystery_method(pets)
  mammal_pets = []
  for pet in pets
    mammal_pets << pet if pet.mammal?
  end
  return mammal_pets
end
```

Q5 - Re-implement previous method `mystery_method` using a nice `iterator` instead.

```ruby
pets = [ MysteryObject.new("mouse"), MysteryObject.new("hummingbird") ]
```

Q6 - Write an `Animal` class that could be use in place of the `MysteryObject` at Q5. Implement a `mammal?` instance method that would work with the code at Q4.

```
class
```

Q7 - Write a class `Dog` which inherits from `Animal`. How `mammal?` should be overriden?

```
class
```

Q8 - Consider this code

```ruby
class Fish
  def self.overview()
    return "Fishes can live in the sea"
  end
  def swim
    # I'm swimming
  end
end
```

Please, write some code **calling** both methods `overview` and `swim`.

```ruby
# TODO: use overview and swim
```

Q9 - Let's define 2 classes, `Liquid` and `Alcohol`.

```ruby
class Liquid
  def drink
    puts "You drank some liquid"
  end
  def evaporate
    puts "There is no more liquid"
  end
end

class Alcohol < Liquid
  def drink
    puts "You are now drunk"
  end
end
```

What is printed line 2 and 3 of the following ruby script?

```
1 beer = Alcohol.new
2 beer.drink
3 beer.evaporate
```

2.
3.

```
1  class Liquid
2    def drink
3      puts "You drank some liquid"
4    end
5    def evaporate
6      puts "There is no more liquid"
7    end
8  end
9
10 class Alcohol < Liquid
11   def drink
12     super
13     puts "You are now drunk"
14   end
15 end
```

Same question with this new `drink` method. What is printed on line 2 and 3.

```
1 beer = Alcohol.new
2 beer.drink
3 beer.evaporate
```

2.
3.